THE EFFECTS OF 1996 FARM LEGISLATION ON FEED AND FOOD GRAINS

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The 1996 Federal Agricultural Improvement and Reform (FAIR) Act of 1996 has been portrayed as a radical departure from the farm policies of the past 60 years. FAIR brought sweeping institutional changes to the basic price and income support programs, many of which had been in place since the 1930s. Close analysis reveals that many of the reforms of the FAIR Act are less revolutionary innovations and more continuations of reforms that began with the 1985 farm legislation and were extended by the 1990 farm bill. Nor should one believe that the changes will result, as some suggest, in large changes in crop acreages or have large effects on the year-to-year variability of farm revenues for these crops. In both cases, the changes in policies may be substantive, but their effective consequences are modest. (*JEL* Q18)

I. INTRODUCTION

The 1996 *Federal Agricultural Improvement and Reform (FAIR) Act* has widely been portrayed as radically reforming U.S. agricultural policy. Gone are restrictive and inefficient regulatory set aside and base acreage controls over farm planting decisions. But gone, too, are long standing deficiency payment programs that provided producers of major commodities—including wheat, corn, grain sorghum, barley, oats and rice—with protection against downward movements in prices. According to conventional wisdom, the outcome of the FAIR Act is an environment in which such farmers enjoy greater flexibility in production but face much more risk.

Early assessments of the FAIR Act suggest that the aggregate impacts of the commodity provisions of the FAIR Act are relatively small (see, for example, FAPRI, 1996; USDA, 1996). With the exception of rice acreage, which is projected to fall as rice income transfers are decoupled from production, these studies conclude that any changes in planted acreage for major program crops, including food and feed grains, are more likely to reflect changes in the Conservation Reserve Program (CRP) than the changes in the income support programs engendered by the FAIR Act.

This paper examines the implications of the 1996 Farm Bill for wheat, feed grains, and rice markets and for producers of those commodities. A careful examination suggests that the direction in which food and feed grain agricultural policies have been moving over the past 11 years has not radically changed under FAIR. Moreover, the so-called "Freedom to Farm" changes in programs for these commodities embedded in the 1996 FAIR Act will not necessarily result in large changes in crop acreage or have large effects on the year-to-year variability or riskiness of farm revenues from these crops. In both cases, the formal changes in policy may be substantive, but the effective consequences of these changes are quite modest.

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ABBREVIATONS

ARP: Acreage Reduction Program
CRP: Conservation Reserve Program
FAIR: Federal Agricultural Improvement and Reform
FOR: Farmer Owned Reserve

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II. THE DEVELOPMENT OF FOOD AND FEED GRAIN AGRICULTURAL POLICIES: 1973–1996

Agriculture policy has been anything but static since the introduction of the Agricultural Adjustment Act of 1933. Over the 63 year period between passage of the 1933 Act and the 1996 FAIR Act, substantial changes have been made to the tools of agricultural policy, the degree of farm gate price and income stability they provide, the levels of income transfers they engender, and the incentives they create for land use patterns. In fact, the 1973 Agriculture and Consumer Protection Act established the institutional framework within which price and income support programs for feed and food crops were implemented in the 1980s and 1990s. (For useful discussions of the history of U.S. farm programs prior to 1996, see Hallberg, 1992; Pasour, 1990; Halcrow, 1984; USDA, 1984.)

Prior to the 1973 Act, producers received direct payments that were fixed prior to harvest. The large increase in food and feed grain prices in 1972–1973 in part reflect large grain purchases by the former Soviet Union. During this period, producers received large direct payments, and market prices reached record highs. This "embarrassment of riches" provoked much criticism in the press and resulted in the tying of payments to market price movements in the 1973 Act. The key new elements of the agricultural support policies introduced in 1973 for these and other "program" commodities were target prices and deficiency payments. The 1973 income transfer program provided producers of major commodities with base acreages for each program crop and assigned crop-specific payment yields to these base acres. In any given year, producers would receive deficiency payments for a particular crop based on the difference, if positive, between the target price and the greater of the national average farm price for the commodity or the loan rate. Producer payments were then established by multiplying the payment rate by the producer's eligible production (eligible program base acreage times program yield). The 1973 Act also retained price supports for each crop through nonrecourse loan programs under which producers could receive nonrecourse loans at loan rate or minimum support prices for all crops raised on "eligible" acres (acres on which they were legally allowed to grow the crops).

The 1996 FAIR Act created a much simpler system of transfer payments for food grain and feed grain producers. While nonrecourse loan programs remain in place, price-based deficiency payments have been replaced by fixed market transition payments that are to be paid annually over the seven year period 1996–2002. Participating producers receive market transition payments equal to their "payment production" times the payment rate. Each producer's payment production equals 85% of the farm's 1996 crop acreage base times the farm's 1995-crop program yield. Farmers may plant any crops they chose on land eligible for production (that is, land whose use is not restricted by commitments under other programs such as the Conservation Reserve Program) other than fruits and vegetables.

The changes introduced in the 1996 FAIR Act therefore certainly appear to be quite radical, but are they? The analysis here considers several aspects of the structure and historical development of feed and food grain agricultural income support programs over the 1973–1996 period: (i) the issue of decoupling of income support payments from actual production, (ii) the elimination of acreage reduction programs, (iii) increased production flexibility, (iv) reductions in federal budget outlays for agriculture, and (v) the effects of farm programs on the variability of farm income. Perhaps not surprisingly, an examination of the provisions of the FAIR Act in relation to each of these issues suggests that many popular conceptions about its implications are probably misconceptions.

A. *Decoupling Support from Actual Production*

From the outset, the farm program established in 1973 began to decouple current government income transfers for program commodities from current output levels. Unlike previous programs in which income supports were largely tied to actual production levels, farmers' deficiency payments were determined by predetermined payment production levels, not the current year's output. Thus, for example, a producer who suffered a total crop loss would still receive a deficiency payment equal to the farm's base acreage times its program yield multiplied by the per unit deficiency payment rate. However, prior to the 1985 Food

Security Act, current production decisions could affect deficiency payments by altering both base acres and assigned yields in subsequent years. Under the Agriculture and Food Act of 1981, for example, the Secretary of Agriculture was given discretion to set a producer's base according to the previous year's plantings or an average of the two previous years' planting. Prior to the 1985 Act, a farm's effective payment yield was set equal to the average yield for that county or a higher "proven" yield for the farm based on an Olympic average of the five previous crop years (calculated by dropping the highest and lowest years from the average). This approach allowed income transfers to farmers to increase over time as average crop yields increased in response to improvements in technology and/or farm input decisions.

Under the 1985 Act, a farm's base acreage was set equal to the simple arithmetic average of the acreage planted or considered planted to the crop in the previous five years. If a producer overplanted his base, he was ineligible for payments that year. This change, which substantially reduced the potential for building base, further decoupled income transfers from current production decisions. In addition, the 1995 Act froze program yields for feed and food grains at 1985 levels. Thus, effectively, most links at the farm level between current production decisions and current or future deficiency payment income transfers had been severed by 1986. By ending the system of base acres that required farmers actually to plant crops in order to receive government transfer payments, the 1996 FAIR Act simply completed the decoupling process for deficiency payments and production decisions that began in 1973.

B. *Elimination of Acreage Reduction Programs*

In addition, the 1996 FAIR Act eliminated annual acreage reduction programs (ARPs) and food and feed grain farmers now have almost complete flexibility over crop planting and production decisions. (Producers are restricted from planting more than 15% of their contract acreage to selected fruits and vegetables. However, this is not likely to have any effect on most wheat, feed grain, and rice producers.) Under previous legislation, to be eligible for income transfer deficiency payments, a producer had to participate in annual ARPs. ARPs attempted to control budgetary outlays on deficiency payments and nonrecourse loans. They restricted production eligible for payment and attempted to keep prices high (and deficiency payment rates low) by taking land out of production. Thus, for example, in 1986 (when market prices were relatively low) corn and wheat producers had respectively to set aside 25% and 30% of their base acreage to be eligible for deficiency payments. By the late 1980s, the importance of acreage reduction programs for controlling budgetary outlays for wheat and feed grains had diminished considerably, partly because of higher prices associated with the droughts of 1988 and 1989, partly because some producers chose to place their land acreage in the "0-92/85" program established under the 1985 Act, but most importantly because of large enrollment in the Conservation Reserve Program (CRP). Under the 0-92 program, established under the 1985 Act, producers could place base acreage in conserving use and receive 92% of their expected deficiency payment. (The Omnibus Budget Reconciliation Act of 1993 changed this to 85% of the expected deficiency payment rate.) Almost 14 million acres were idled under the 0-92/85 program in 1995. By the early 1990s, the CRP, a voluntary 10 year paid acreage retirement program also initiated by the 1985 Act, had resulted in the long-term retirement of over 10 million acres of wheat base acres and 10 million acres of feed grain base.

C. *Increased Planting Flexibility*

Restrictive rules governing base acreage calculations under the 1981 and 1985 farm bills made switching to nonprogram crops like soybeans much more costly. Planting less program crop acreage reduced eligible base acreage in subsequent years. For example, under the 1985 Act, a producer with a 100 acre corn base who chose to plant soybeans on those acres would lose 20 acres of corn base in the subsequent year and ultimately one third of that base unless he left the program to rebuild base. The base acreage in the subsequent year would equal (100+100+100+100+0)/5 = 80 acres. In the following year, this would fall to 76 acres (100+100+100+0+80)/5, and so on.

TABLE 1
Summary of Compliance Reports, 1992–1995

Program crop	Percent of Normal Flex Acres: Plated to that crop	Planted to another crop	Idled[a]	Percent of Optional Flex Acres to another crop
Wheat	48.9	24.9	26.2	7.8
Corn[b]	54.5	36.7	8.8	9.0
Grain Sorghum[c]	30.6	42.2	27.2	9.9
Barley	22.9	41.7	35.4	14.6
Oats	15.9	53.7	30.4	35.6
Upland cotton	67.8	15.0	17.1	3.1
Rice	30.5	46.5	22.9	7.5

[a]Total flex acres minus acres reported planted to that crop minus acres planted to another crop.
[b]Normal flex acres planted to another crop includes acreage planted to sorghum.
[c]Normal flex acres planted to another crop includes acreage planted to corn.

Soybean acreage fell by over 10 million acres from 1982 to 1985, in large part because of the level of the corn target price relative to soybean prices. However, when soybean prices rose sharply relative to corn prices in the late 1980s, producers were faced with little or no ability to shift production out of corn and into soybeans due to restrictive base provisions. These problems were mitigated in the 1990 Food, Agriculture, Conservation and Trade Act. Under the 1990 Act, producers could plant any nonprogram or program crop (other than selected fruits and vegetables) on up to 15% of their base acreage ("normal flex acres") and could also choose to forego deficiency payments on an additional or optional 10% of their base acres in order to plant those acres to other crops ("other flex acres"). Thus, after 1990, program crop producers could choose to reallocate up to 25% of their base acres to other crops. The evidence suggests that feed and food grain producers have never fully utilized the planting flexibility provided by the 1990 Act. Program compliance data for the period 1992–1995 show that corn and wheat producers planted about 50% of normal flex acres and that over 90% of optional flex acres remained planted to corn and wheat (table 1). Moreover, in no state did the planted acres for program food and feed grain crops (or soybeans) rise or fall by more than 15% between 1990 and 1995. Thus, it seems unlikely that the provisions of the 1996 FAIR Act that remove almost all restrictions on planting decisions at the individual farm level will have large effects on total acres planted to individual feed and food grain crops. Farm choices with respect to planting decisions are affected by relative prices but also are often heavily constrained by agronomic considerations with respect to weather, disease, pest infestations, soil erosion concerns, and other problems. In general, estimates of acreage supply response price elasticities in unconstrained environments have been quite small.

D. *Reduction in Support Levels*

It also is not clear that the 1996 FAIR Act involves a cut in support for the farm sector in general and feed and food grain producers. Budgetary considerations have played major roles in the debate over and development of farm policies over the past 15 years. Between 1981 and 1985, target prices for wheat and corn rose 15 and 26%, respectively (table 2). By 1985, nonrecourse loan rates for wheat and corn were $3.30 per bushel and $2.55 per bushel, respectively. As a result, deficiency payments increased steadily, and large government inventories were accumulated. For example, total deficiency payments for wheat and feed grains rose from $696 million for the 1981 crop year to $4.4 billion for the 1985 crop year.

In response, the 1985 Act based loan rates for wheat and feed grains on a percentage of past market prices and gave the Secretary of Agriculture discretionary authority to reduce

TABLE 2

Target Prices, Loan Rates, and Deficiency Payments for Wheat and Corn, 1981–1995
(dollars per bushel)

	Wheat			Corn		
Year	Target Price	Loan Rate	Deficiency Payment	Target Price	Loan Rate	Deficiency Payment
1981	3.81	3.20	0.12	2.40	2.40	0.00
1982	6.05	3.55	0.50	2.70	2.55	0.15
1983	4.30	3.65	0.65	2.86	2.65	0.00
1984	4.38	3.30	1.00	3.03	2.55	0.43
1985	4.38	2.40	1.08	3.03	2.55	0.48
1986	4.38	2.40	1.96	3.03	1.92	1.11
1987	4.38	2.28	1.81	3.03	1.82	1.11
1988	4.29	2.21	0.69	2.93	1.77	1.09
1989	4.10	2.05	0.32	2.84	1.65	0.36
1990	6.00	1.95	1.28	2.75	1.57	0.51
1991	6.00	2.04	1.35	2.75	1.62	0.41
1992	6.00	2.21	0.81	2.75	1.72	0.73
1993	4.00	2.45	1.03	2.75	1.72	0.28
1994	4.00	2.58	0.95	2.75	1.89	0.57
1995	4.00	2.58	0.00	2.75	1.89	0.00

Source: USDA Agricultural Outlook (various issues).

commodity loan rates further when average market prices were low. As a result, by 1990, loan rates for wheat and corn had been reduced to 40% below their 1985 levels. In addition, between 1987 and 1990, target prices for wheat and feed grains were reduced by about 9%. However, deficiency payments for those crops remained large throughout the period covered by the 1985 farm bill, averaging $6.9 billion per year. Thus, under the 1990 Act, target prices were fixed at 1989 levels, but to meet Federal budget goals, 15% of each producer's base acreage became ineligible for deficiency payments. This provision further reduced the amount of production eligible for deficiency payments, continuing a trend which began in the 1985 Act with the freezing of program yields (Westcott, 1993). Deficiency payments for wheat and feed grains subsequently averaged less than $4.0 billion annually over the 1991–1995 crop years, but because of their countercyclical nature, payments were variable, ranging from $5.4 billion in 1992 to zero in 1995.

Under the 1996 FAIR Act, wheat and feed grain producers will receive $29.2 billion in market transition payments over seven years. While the total amount is roughly equal to the level of payments for wheat and feed grains for the seven previous fiscal years, payment levels decline over the period, falling to $3.2 billion in 2002 (table 3). When first proposed by Congressman Roberts in July 1995, the Freedom to Farm Act was projected to save $13 billion over seven years compared to a continuation of the 1990 Act. Opponents in Congress decried the draconian nature of the cuts. Ironically, based on current estimates, the 1996 FAIR Act is likely to result in higher income transfers to farmers than would have been paid if the 1990 Act been extended. Strong export markets combined with domestic crop shortfalls sent wheat and feed grain prices above target price levels in 1995. Prices remained high through 1996. In December 1995, the Congressional Budget Office estimated that the FAIR Act would save only $1 billion over a continuation of the 1990 Act. Administration estimates were even less sanguine. Based on the January 1996 President's budget baseline, USDA estimated that the new farm bill would likely *cost* over $24 billion more than spending assuming continuation of the 1990 Act. The change in budget estimates underscores the counter cyclical nature of deficiency payments, and helps to explain why the FAIR Act was so widely supported by wheat and feed grain producers (Orden et al., 1996). Far from reducing government outlays in direct farm subsidies, the 1996 FAIR Act

TABLE 3
Planned Food and Feed Grain Market Transition Payments, 1996–2002

Year	Wheat	Corn	Other Feed Grains[a]	Total
		(billion $)		
1996	1.46	2.57	0.42	4.45
1997	1.41	2.49	0.40	4.30
1998	1.52	2.68	0.43	4.63
1999	1.47	2.59	0.42	4.48
2000	1.35	2.37	0.38	4.10
2001	1.08	1.91	0.31	3.30
2002	1.05	1.85	0.30	3.20

[a]These include grain sorghum, barley, and oats.
Source: USDA Agricultural Outlook, (various issues).

instead likely will result in income transfers well in excess of those that would have been made under the previous legislation.

E. *Income Variability*

The most controversial feature of the 1996 FAIR Act was the replacement of price-based deficiency payments with fixed payments. The 1973 target price/deficiency program guaranteed that feed and food grain producers would receive at least the target price for their output from planted base acres when actual yields fell below program yields. When actual yields exceeded program yields, they would at least receive the target price on program yields. Thus, the target price/deficiency payment program provided farmers with some hedge against downside price risk.

Perhaps not so correctly, it has also been viewed as providing them with a degree of revenue insurance no longer available under the 1996 FAIR Act. The effectiveness of deficiency payments in providing revenue protection can be questioned on two grounds. First, the amount of actual production covered by deficiency payments declined by about 25% under the 1985 and 1990 farm bills because of frozen program yields and the introduction of nonpayment acres (Westcott, 1993). Second, the effectiveness of deficiency payments in providing revenue protection depends on the degree to which a producer's yield is correlated to aggregate yield and price. Widespread droughts typically result in high prices and hence small deficiency payments. Thus, deficiency payments may be poor instruments to offset drops in individual farm revenues caused by poor yields. Since 1980, under the Federal Crop Insurance Act of that year and subsequent legislation, almost all producers of food and feed grains have been able to purchase federally offered subsidized multiple peril or all risk corp insurance. Under the 1994 Federal Crop Insurance Reform Act, purchase of federally offered catastrophic insurance coverage (under which producers receive indemnities when yields fall below 50% of average) became mandatory for all farmers participating in government income transfer programs. Under the 1996 FAIR Act, purchase of catastrophic crop insurance coverage is no longer mandatory, but producers of major crops who refuse to purchase such contracts must waive their rights to receive disaster assistance for losses during that crop year. Gardner and Kramer (1985), Goodwin and Smith (1995), and Kramer (1983) provide histories of U.S. federal crop insurance and disaster relief programs up to 1995. Lastly, in recent years, direct government payments have been a relatively small component of total farm cash income, accounting for less than 5%, on average, over 1991–1995 (USDA/ERS 1996).

III. EFFECTS OF THE 1966 ACT ON WHEAT AND FEED GRAIN MARKETS AND PRODUCERS

Instead of representing a radical departure from previous policy, the 1996 FAIR Act actually reflects just one step in a more gradual evolution of U.S. agricultural policy towards greater market orientation that began with the 1985 farm bill. Most analyses of the 1996 Act

suggest that there will be little change in acreage or prices for wheat and feed grains (USDA, 1996; FAPRI, 1996) and attribute any difference among these analyses to differences in assumptions about how USDA will implement the Conservation Reserve Program over the next seven years or to differences in assumptions about future export market growth.

Given the above discussion, these results are not surprising. Full decoupling of support represents a marginal change from program yield and base restrictions built into the provisions of the 1985 and 1990 Acts. Under the 1996 Act, producers will be able to receive payments even if their land is in a conserving use, but producers already had similar flexibility to idle land under the 0-85-92 programs. Acreage reduction programs have been eliminated, but ARP levels declined significantly for most crops between the mid-1980s and 1995. Most baseline estimates (USDA, 1996; FAPRI, 1996) suggest that, because of projected growth in export markets, future ARP levels would have been zero for wheat and feed grains had the 1990 Act been continued. The 1996 Act provides producers with "two-way" flexibility; that is, they are now able to plant corn on soybean acreage as well as soybean on corn acreage. However, as noted above, acreage compliance reports for 1992–1995 suggest that producers' planting decisions were not severely constrained under the 1990 Act. Yet, while the aggregate forecasts of nonstochastic models indicate that change in legislation will have little effect on production decisions, the 1996 FAIR Act does provide producers with flexibility to respond to changing market conditions. This flexibility should tend to stabilize rather than destabilize markets.

A. *The Effects on Supply Variability*

The 1996 FAIR Act has been criticized on the grounds that it is likely to destabilize commodity markets. Critics point to the elimination of Acreage Reduction Programs and the fact that production is now decoupled from farm payments (for example, see Zulauf et al., 1996). But compelling arguments suggest that acreage flexibility may lead to more stable farm incomes because producers will be able to better respond to changing market conditions. The 1996 crop year is a good case in point. Poor weather affected winter wheat acreage, so producers plowed up some one million acres of winter wheat in Indiana and Illinois and replanted corn and soybeans. Under previous farm bills, base restrictions would have prevented producers from overplanting their corn base or penalized wheat producers for planting soybeans on wheat base.

Moreover, previous farm legislation restricted when ARP levels could be announced and provided little recourse if market conditions changed substantially prior to planting. For example, under the 1990 Act, the Secretary was required to set the feed grain ARP by no later than September 30 prior to the calendar year in which the crop is harvested. The Secretary was given authority to make adjustments in that level by November 15 if the total supply of feed grains significantly changed after the program was first announced. In that case, the Secretary could allow producers to participate on a voluntary basis in a reduction (increase) in the set aside as long as their deficiency payments were offset accordingly. Even then, ARP levels could be increased by no more than 10 percentage points or cut by more than 50%. The net effect was to make changes in the ARP level difficult and largely ineffectual (because of the offset in deficiency payments) after November 15. The decision to set the 1995 corn ARP at 7.5% was widely criticized 18 months later when grain prices were hitting record highs, but when the initial decision was made in September 1994, the projected stocks-to-use level mandated a minimum 7.5% ARP. It was only after November 15, 1994 that export markets exploded and corn futures rose. Had the 1996 FAIR Act been in place, it is quite possible that producers would have planted more corn, thus dampening some of the increases in corn prices that were experienced in 1996.

B. *The Effects on Price and Revenue Variability*

Increased planting flexibility should allow farmers to react more quickly to changing market conditions and hence act to stabilize market prices. Critics point to provisions in the 1996 Act that suspend authority for operating the Farmer Owned Reserve (FOR). The FOR, authorized by the Food and Agriculture Act of

1977, was designed to provide storage when wheat and feed grains were in abundant supply and to provide a buffer against unusually sharp price movements. However, changes in the FOR since 1985—including the lowering of loan rates, more restrictive entry, and storage payment provisions made in the 1990 farm bill—probably had marginalized the FOR by the early 1990s.

Much is made of the effects of the 1996 FAIR Act on "the farm safety net." Yet, price-based deficiency payments provide less stability to producers whose yields are relatively correlated to national yields. The droughts affecting wheat producers in the Southern Plains in 1996 demonstrated that fixed market contract payments can provide producers with some income protection against yield losses when target price-based payments would have been non-existent. Increased planting flexibility also may provide more income stability to producers. With respect to fixed payments, one should note that as these payments decline over the duration of the Act, they will become less important as a source of income stability.

IV. CONCLUSIONS

Whether or not the 1996 farm legislation leads to more substantial reform over the long run remains an open question. Among many conservative policymakers, a major selling point for Congressman Roberts' Freedom to Farm House Bill is that it would abolish all permanent legislation for agricultural subsidies via intervention in commodity markets, including the provisions of so-called "permanent legislation"—that is, the Agricultural Adjustment Acts of 1938 and 1949 that established essential elements of the loan rate program. These provisions were included in the House version of the 1996 farm bill, but were excluded from the Senate's version. In conference, the Senate's version prevailed, and the permanent legislation was preserved. Thus, by 2002, Congress will have to readdress farm programs, including food and feed grain policies, or yet again confront an archaic and expensive farm program. One interpretation of this aspect of the 1996 farm bill debate is that the market transition payments provided by the 1996 legislation will aid the farm sector as it moves towards a "new subsidy" environment rather than a "no subsidy" environment. In the interim, while the 1996 FAIR Act involves substantive changes in the structure of U.S. agricultural policy, its substantive effects on agricultural production seem likely to be quite small. In addition, even the policy initiatives incorporated in the FAIR Act represent more of an evolutionary approach to agricultural policy change than a revolutionary one.

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